



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#7 Petition
Withdrawal of
Abandonment
Cabin
May 31, 04

In re Application of: Michael Luther

Serial No: 09/919,457

Filed: July 30, 2001

Title: SYSTEM AND METHOD OF
MANAGING DATA
TRANSMISSION LOADS

) Examiner: Backer, Fermin

) Art Unit: 3622

) Certificate of Mailing

) I, Kim A. Cabello, hereby certify that this paper
or fee is being deposited with the United States
Postal Service as first class mail under 37 C.F.R.
§ 1.8 on August 21, 2003, and is addressed to
Commissioner for Patents, P.O. Box 1450,
Alexandria, VA 22313-1450.

) By: Kim A. Cabello
Kim A. Cabello

REQUEST FOR WITHDRAWAL OF HOLDING OF ABANDONMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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MAY 20 2004
GROUP 3600

Sir:

In accordance with 37 C.F.R. 1.8 (b), Applicants request withdrawal of the Notice of Abandonment issued May 5, 2004 in the above-identified matter. The Notice indicated that the application was abandoned for failure to file a response to the Office Action issued October 31, 2003. The undersigned attorney has personal knowledge that a Response to the Office Action was deposited with the United States Postal Service as first class mail, in an envelope addressed to , Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on April 28, 2004, with a Certificate of Mailing signed by Kim A. Cabello. A post card receipt indicates that the Response was received in the Patent and Trademark Office April 30, 2004. A true and correct

copy of the Response to Office Action is enclosed herewith, along with the date-stamped receipt, as Exhibit A.

Return of the application to pending status and early consideration on the merits is respectfully requested.

According to 37 C.F.R. 1.8 (b), no fee is due in connection with this communication. However, if any fees are due in connection with the submission, please charge any such fee to Deposit Account No. 50-2212.

Respectfully submitted,



Victor J. Castellucci
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Attorney for the Applicant
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Attorney for Applicant(s)

Dated: May 12, 2004



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GROUP 3600

PAT-103 5/02 PTO RECEIPT FOR INDICATED ITEMS Atty VJC
Appln. No: 09/919,457 Date 04-28-04
Inventor(s) Michael Luther C# 053403
Title: SYSTEM AND METHOD OF MANAGING DATA M# 272577
TRANSMISSION LOADS

ENCLOSED:

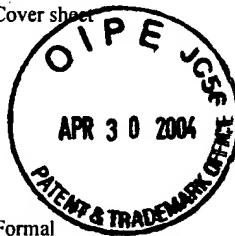
☒ Amendment ☐ Appendix ☐ Cover sheet
___ No. of Pages Abstract
___ No. of Pages Spec and Claims
___ No. of numbered Claims only
☐ Declaration (___ #pgs)
☐ Assignment ☐ Cover Sheet
___ No. of Priority Documents
___ No. Sheets Drawings (Fig(s) 1 to ___) ☐ 1 set Formal
\$ 475.00 To be charged to Dep. Acct. No. 50-2212
Other: Transmittal Letter (in duplicate); Change of Address; and Return
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CURRENT DUE DATE: May 5, 2004

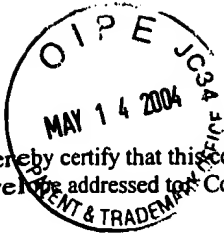
PAT-103 5/02 PTO RECEIPT FOR INDICATED ITEMS Atty VJC
Appln. No: 09/919,457 Date 04-28-04
Inventor(s) Michael Luther C# 053403
Title: SYSTEM AND METHOD OF MANAGING DATA M# 272577
TRANSMISSION LOADS

ENCLOSED:

☒ Amendment ☐ Appendix ☐ Cover sheet
___ No. of Pages Abstract
___ No. of Pages Spec and Claims
___ No. of numbered Claims only
☐ Declaration (___ #pgs)
☐ Assignment ☐ Cover Sheet
___ No. of Priority Documents
___ No. Sheets Drawings (Fig(s) 1 to ___) ☐ 1 set Formal
\$ 475.00 To be charged to Dep. Acct. No. 50-2212
Other: Transmittal Letter (in duplicate); Change of Address; and Return
Postcard



CURRENT DUE DATE: May 5, 2004



CERTIFICATE OF MAILING

I hereby certify that this correspondence and all marked attachments are being deposited with the United States Postal Service as first class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on April 28, 2004.

By: _____

Kim A. Cabello
Kim A. Cabello

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT APPLICATION

Inventor(s): Michael L Uther

Appln. No.: 09 | 919,457

Series Code ↑

Serial No. ↑

Filed: July 30, 2001

Mail Stop Non-Fee Amendment

Hon. Commissioner for Patents

PO Box 1450

Alexandria, VA 22313-1450

Group Art Unit

3621

Examiner:

BACKER, Firmin

Atty. Dkt.

053403

272577

C-M

Client Ref

Appln. Title:

SYSTEM AND METHOD OF
MANAGING DATA TRANSMISSION
LOADS

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MAY 20 2004

GROUP 3600

Sir:

REPLY/AMENDMENT/LETTER

Date: April 28, 2004

This is a reply/amendment/letter in the above-identified application and includes the herewith attachment of same date and subject which is incorporated hereinto by reference and the signature below is treated as the signature to the attachment in absence of a signature thereto.

FEE REQUIREMENTS FOR CLAIMS AS AMENDED

1. Small Entity claim	Claims remaining after amendment	Highest number previously paid for	Present Extra	Large/Small Entity	Additional Fee	Fee Code Lg/Sm
A. <input type="checkbox"/> NOT made B. <input type="checkbox"/> Withdrawn C. <input type="checkbox"/> made herewith D. <input checked="" type="checkbox"/> made previously						
For B & C See Required Separate Paper (Pat-256)						
2. Total Effective Claims	38	**minus 39	0	x \$18/\$9 =	+ \$0	1202/2202
3. Independent Claims	5	***minus 5	0	x \$86/\$43 =	+ \$0	1201/2201
4. If amendment enters proper multiple dependent claim(s) into this application for first time (leave blank if this is a reissue application)..... add				+ \$290/\$145 =	+ \$0	1203/2203
5. Original due Date: February 5, 2004 <input type="checkbox"/> NONE						
6. Petition is hereby made to extend the original due date to cover the date this response is filed for which the requisite fee is attached	(1 mo) \$110/\$55 = (2 mos) \$420/\$210 = (3 mos) \$950/\$475 = (4 mos) \$1,480/\$740 = (5 mos) \$2,010/\$1,005 =			+ \$475		1251/2251 1252/2252 1253/2253 1254/2254 1255/2255
7. Enter any previous extension fee paid since above original due date and subtract			- \$0			
8.			Extension Fee	+ \$475		
9. If Terminal Disclaimer attached, add Rule 20(d) official fee			+ \$110/\$55	+ \$0		1814/2814
10. If IDS attached requires Official Fee under Rule 97 (c), add			+ \$180	+ \$0		1806
or if Rule 97(d) Request add			+ \$180	+ \$0		1806
11. After-Final Request Fee per rules 129(a) and 17(r)			+ \$770/385	+ \$0		1809/2809
12. No. of additional inventions for examination per Rule 129(b)			x \$770/385 ea	+ \$0		1810/2810
13. Request for Continued Examination (RCE)			+ \$770/385	+ \$0		1801/2801
14. Petition fee for				+ \$0		
15.			TOTAL FEE =	\$475		
16. *If the entry in this space is less than entry in next space, the "Present Extra" result is "0".						
17. **If the "Highest number previously paid for" in this space is less than 20, write "20" in this space.						
18. ***If the "Highest number previously paid for" in this space is less than 3, write "3" in this space.						

PLEASE CHARGE
OUR DEP. ACCT

Our Deposit Account No. 03-3975)

(Our Order No. 053403

272577

CHARGE STATEMENT: The Commissioner is hereby authorized to charge any fee specifically authorized hereafter, or any missing or insufficient fee(s) filed, or asserted to be filed, or which should have been filed herewith or concerning any paper filed hereafter, and which may be required under Rules 16-18 (missing or insufficiencies only) now or hereafter relative to this application and the resulting Official Document under Rule 20, or credit any overpayment, to our Accounting/Order Nos. shown above, for which purpose a duplicate copy of this sheet is attached.

This **CHARGE STATEMENT** does not authorize charge of the issue fee until/unless an issue fee transmittal sheet is filed.

Query: Is appeal deadline now? If so, file Notice of Appeals separately.

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Atty/Sec: VJC/kac

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By Atty: Victor J. Castellucci

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NOTE: File this cover sheet in duplicate with PTO receipt (PAT-103A) and attachments



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Michael Luther

Serial No.: 09/919,457

Filed: July 30, 2001

For: SYSTEM AND METHOD OF
MANAGING DATA
TRANSMISSION LOADS

) I hereby certify that this paper and the attached
) papers are being deposited with the United States
) Postal Service as first class mail in an envelope
) addressed to:
) Mail Stop Fee Amendment
) Commissioner for Patents
) P.O. Box 1450
) Alexandria, VA 22313-1450, on this date

) 4-28-04 Kim A. Cabello
) Date Kim A. Cabello

AMENDMENT UNDER 37 C.F.R. 1.111(a)

Mail Stop Fee Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RECEIVED
MAY 20 2004
GROUP 3600

Sir:

Responsive to the Office Action dated November 5, 2003, the time for response having been extended to May 5, 2004, by concurrent petition and payment of fee, please amend the above-referenced application as follows:

Amendments to the Claims are reflected in the listing of claims that begins on page 2 of this paper.

Remarks begin on page 7 of this paper.

LISTING OF CLAIMS

1. (Currently Amended) A method of managing a data transmission load in a communication network; said method comprising:
 - receiving transmitted data at a data transmission load manager;
 - determining a current data transmission load capacity at each of a plurality of data communication processors;
 - identifying a network transaction to which said transmitted data is related;
 - executing a hash function in accordance with said identifying; and
 - distributing said transmitted data to a selected one of said plurality of data communication processors in accordance with said determining and said executing such that every data packet associated with said network transaction is distributed to said selected one of said plurality of data communication processors.
2. (Original) The method of claim 1 wherein said receiving includes providing said data transmission load manager with a network address representative of said plurality of data communication processors.
3. (Original) The method of claim 1 wherein said identifying includes examining said transmitted data to ascertain an intended recipient.
4. (Original) The method of claim 3 wherein said examining includes determining a transaction identification value associated with said transmitted data.
5. (Original) The method of claim 1 further comprising:
 - providing results of said executing to a modulo function; and
 - computing a modulo value representative of one of said plurality of data communication processors;
 - wherein said distributing is further in accordance with said computing.
6. (Original) The method of claim 4 wherein said determining includes accepting, at said data transmission load manager, one or more load status signals from each of said plurality of data communication processors.
7. (Original) The method of claim 6 wherein said distributing is responsive to said transaction identification value and said one or more load status signals.
8. (Currently Amended) A data transmission load management system comprising:
 - a plurality of data processors; and

a load manager operative to distribute an incoming data packet to a selected one of said plurality of data processors in accordance with a current data transmission load capacity at each of said plurality of data processors and further in accordance with a network transaction with which said data packet is associated such that every said data packet associated with said network transaction is distributed to said selected one of said plurality of data processors.

9. (Original) The system of claim 8 wherein said load manager is provided with a network address representative of said plurality of data processors.
10. (Original) The system of claim 8 wherein said load manager is a computer server.
11. (Original) The system of claim 10 wherein each of said plurality of data processors is an independent computer server.
12. (Original) The system of claim 8 wherein said load manager comprises a hash function providing output associated with said incoming data in accordance with said network transaction.
13. (Original) The system of claim 12 wherein said load manager comprises means for identifying an intended recipient of said incoming data and for supplying information related to said intended recipient to said hash function.
14. (Original) The system of claim 12 wherein said load manager comprises a function to modulo said output over said plurality of data processors.
15. (Original) The system of claim 12 wherein said load manager receives load capacity signals from each of said plurality of data processors.
16. (Original) The system of claim 15 wherein said load manager distributes said incoming data responsive to said load capacity signals and said output.
17. (Currently Amended) A computer readable medium encoded with data and computer executable instructions for managing a data transmission load in a communication network; the data and instructions causing a computer executing the instructions to:
 - receive transmitted data at a data transmission load manager;
 - identify a network transaction to which said transmitted data is related;
 - determine a current data transmission load capacity at each of a plurality of data communication processors;
 - execute a hash function providing output in accordance with said network transaction; and

distribute said transmitted data to a selected one of said plurality of data communication processors in accordance with said current data transmission load capacity and said output of said hash function such that every data packet associated with said network transaction is distributed to said selected one of said plurality of data communication processors.

18. (Original) The computer readable medium of claim 17 further encoded with data and instructions, further causing an apparatus to provide said data transmission load manager with a network address representative of said plurality of data communication processors.
19. (Original) The computer readable medium of claim 17 further encoded with data and instructions, further causing an apparatus to identify an intended recipient of said transmitted data.
20. (Original) The computer readable medium of claim 17 further encoded with data and instructions, further causing an apparatus to determine a transaction identification value associated with said transmitted data.
21. (Original) The computer readable medium of claim 20 further encoded with data and instructions, further causing an apparatus to distribute every data packet having a particular transaction identification value to a selected one of said plurality of data communication processors.
22. (Original) The computer readable medium of claim 17 further encoded with data and instructions, further causing an apparatus to:
provide said output to a modulo function;
compute a modulo value representative of one of said plurality of data communication processors; and
distribute said transmitted data in accordance with said modulo value.
23. (Original) The computer readable medium of claim 17 further encoded with data and instructions, further causing said data transmission load manager to accept a load status signal from each of said plurality of data communication processors.
24. (Original) The computer readable medium of claim 23 further encoded with data and instructions, further causing an apparatus to analyze each said load status signal to determine relative residual processing capacity for each of said plurality of data communication processors.
25. (Currently Amended) A data transmission load management system for use in a packet-switched communications network; said system comprising:

a plurality of data processors; and
a load manager operative to distribute an incoming data packet to a selected one of said plurality of data processors; said load manager comprising:
load determining means for determining current data transmission load capacity at each of said plurality of data processors;
transaction identifying means for identifying a network transaction with which said data packet is associated; and
data distribution means for distributing ~~an~~ said incoming data packet to a selected one of said plurality of data processors responsive to said load determining means and said transaction identification means such that every said data packet associated with said network transaction is distributed to said selected one of said plurality of data processors.

26. (Original) The system of claim 25 wherein said load manager is provided with a network address representative of said plurality of data processors.
27. (Original) The system of claim 25 wherein said load determining means is responsive to load capacity signals from each of said plurality of data processors.
28. (Original) The system of claim 25 wherein said transaction identifying means is responsive to a transaction identification value associated with said data packet.
29. (Original) The system of claim 28 wherein said load manager distributes every data packet having a particular transaction identification value to a selected one of said plurality of data processors.
30. (Original) The system of claim 25 wherein said load manager further comprises a hash function providing output associated with said data packet in accordance with said network transaction.
31. (Original) The system of claim 30 wherein said load manager further comprises a function to modulo said output over said plurality of data processors.
32. (Currently Amended) A packet-switched data communication network comprising:
a plurality of data processors; each of said plurality of data processors having processing capacity, executing data transmission processing tasks, and forwarding data packets to one or more intended recipients; and
a load manager; said load manager operative to identify a network transaction with which transmitted data packets are associated, to receive signals from each of said plurality of data processors related to said processing capacity, and to

distribute said data packets to a selected one of said plurality of data processors in accordance with said processing capacity and further in accordance with said network transaction such that every said data packet associated with said network transaction is distributed to said selected one of said plurality of data processors.

33. (Original) The packet-switched data communication network of claim 32 wherein said load manager is provided with a network address representative of said plurality of data processors.
34. (Original) The packet-switched data communication network of claim 32 wherein said load manager is a computer server.
35. (Original) The packet-switched data communication network of claim 34 wherein each of said plurality of data processors is an independent computer server.
36. (Original) The packet-switched data communication network of claim 32 wherein said load manager comprises a hash function providing output for each of said transmitted data packets in accordance with said network transaction.
37. (Original) The packet-switched data communication network of claim 36 wherein said load manager comprises a function to compute the modulo of said output over said plurality of data processors.
38. (Original) The packet-switched data communication network of claim 37 wherein said load manager distributes said data packets responsive to said processing capacity and said modulo.
39. (Canceled)

REMARKS

Claims 1-38 are all the claims pending in the present application, claims 1, 8, 17, 25, and 32 having been amended to recite aspects of the disclosed embodiments with more particularity, and claim 39 having been canceled without prejudice or disclaimer. Support for the foregoing amendments is found throughout the present application, and in particular, in the written description beginning at page 7, line 27, and continuing to page 8, line 22, with specific reference to FIG. 2; similar support is located in the text at page 13, lines 15-19. No new matter has been added.

Claims 8-12, 15, 16, 25-29, 32-36, and 39 stand rejected under 35 U.S.C. §102(e) as anticipated by United States Patent Application Publication (US 2002/0032777 A1) to Kawata et al. (Kawata). Claims 1-7, 13, 14, 17-24, 30, 31, 37, and 38 stand rejected under 35 U.S.C. §103(a) as unpatentable over Kawata in view of United States Patent Application Publication (US 2003/0037093 A1) to Bhat et al. (Bhat). Applicants respectfully traverse the prior art rejections and request reconsideration and allowance of all the pending claims in light of the following remarks.

Aspects of the present invention relate generally to managing data traffic transmitted across a communications network, and more particularly to a system and method providing distribution of data packets among a plurality of call control modules or data processors. In the exemplary load management systems and methods described and claimed in the present application, the number of messages or data packets distributed to each processor may be maintained substantially uniform, and all the messages or data packets corresponding to a particular network transaction or data communication may be distributed to the same processor. Specifically, as recited in the independent claims, every data packet associated with a network transaction is distributed to the same selected one of a plurality of data communication processors.

The Rejections Under §102(e)

Claims 8-12, 15, 16, 25-29, 32-36, and 39 stand rejected under 35 U.S.C. §102(e) as anticipated by Kawata. To anticipate a pending claim under any of the various subsections of 35 U.S.C. §102, a single reference must teach every element recited in the pending claim; as set forth in more detail below, the Kawata publication is more deficient than the Examiner acknowledges. In particular, the published application is insufficient to anticipate the pending claims.

Independent claims 8 and 32 both recite an element directed to distributing network transaction data packets “such that every said data packet associated with said network transaction is distributed to said selected one of said plurality of data processors” (*see, e.g.*, claim 8; other pending independent claims 1, 17, 25, and 32 include similar recitations). While Kawata arguably teaches distributing incoming data to one of a plurality of processors, Kawata neither teaches nor suggests that every data packet associated with a particular transaction is distributed to the same processor.

In rejecting claim 39 in paragraph 20 of the outstanding Office Action, the Examiner relied upon paragraphs 0005-0010 and 0037-0042 of Kawata. The text at these portions of Kawata does not support the Examiner’s position, nor do the fair teachings at any other portion of the publication. While Kawata addresses “service request” packets, the publication is silent with respect to treatment of the data packets associated with each “service;” and certainly does not teach a load distribution methodology as described in the present application and recited with particularity in the claims.

As set forth in detail at paragraphs 0040 and 0041, for example, the Kawata system is operative in accordance with address header information for transmitted “service request” packets, and does not contemplate any particular manner of handling each packet associated with a particular “service.” Even assuming, *arguendo*, that the Examiner were to interpret an individual “service” contemplated in Kawata as equivalent to the more complicated “network transaction” described and claimed in the present application, then Kawata is clearly deficient to the extent that it fails to teach or even to suggest how each data packet associated with that individual “service” is distributed.

In any event, Applicants note that the individual “services” taught in the Kawata publication are not equivalent to the “network transactions” described (*see, e.g.*, the text at page 3, line 20, through page 4, line 10) and claimed in the present application. Specifically, as set forth in the description at paragraph 0041 of Kawata, a different server is selected “each time a service request packet is received.” Accordingly, individual services, *even when associated with the same network transaction*, are handled differently, each as a function of current load conditions at the plurality of servers. The methodology taught in Kawata is clearly different from that described and claimed in the present application.

Based at least upon the foregoing, Applicants submit that the Kawata publication is insufficient to anticipate any of the pending claims, and that the rejection of claims 8-12, 15, 16, 25-29, 32-36, and 39 under 35 U.S.C. §102(e) is improper. In addition to the reasons set forth

above with specific reference to the independent claims, their respective dependencies are also allowable for the specific recitations therein.

The Rejections Under §103(a)

Claims 1-7, 13, 14, 17-24, 30, 31, 37, and 38 stand rejected under 35 U.S.C. §103(a) as unpatentable over Kawata in view of Bhat. Applicants respectfully submit that Bhat fails to supply the clear deficiencies of Kawata. For example, the Examiner has relied upon the Bhat publication for its teachings related to hash functions and modulo functions in the context of load distribution techniques. Given the foregoing shortcomings of Kawata, however, Applicants submit that the alleged teachings of Bhat are unremarkable. This would be true even if the Examiner's analysis of Bhat were correct, and even if the combination of Kawata and Bhat were appropriate, *i.e.*, even the combined teachings still fail to address every element recited in the pending claims.

In particular, the Bhat publication neither teaches nor even suggests, among other things, the data packet distribution strategy described in the pending application and called out in every pending claim. Assuming, *arguendo*, that the combination were proper, the fair teachings of Kawata and Bhat, even when considered in combination, still fail to teach a methodology of distributing network transaction data packets "such that every said data packet associated with said network transaction is distributed to said selected one of said plurality of data processors."

Accordingly, the Examiner has failed to establish a *prima facie case* of obviousness, and the rejections under 35 U.S.C. §103(a) are improper. At least for the reasons set forth above with specific reference to claims 1, 8, 17, 25, and 32, their respective dependencies are also allowable. Further, claims 2-7, 13, 14, 18-24, 30, 31, 37, and 38 recite additional features and combinations of elements, and Applicants submit that these claims are additionally allowable for their respective recitations as well.

CONCLUSION


Based at least upon the foregoing Remarks, Applicants respectfully submit that all the pending claims are allowable, and that the present application is currently in condition for allowance. The Examiner is encouraged to contact the undersigned at 858-509-4007 if it is believed that a discussion may advance the prosecution of this case.

Applicants believe that a fee is required at this time. Please apply any charges or credit any overpayments to Deposit Account No. 50-2212.

Respectfully submitted,

PILLSBURY WINTHROP LLP

By



Victor J. Castellucci
Registration No. 43,535

Dated: April 28, 2004

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